

REMARKS

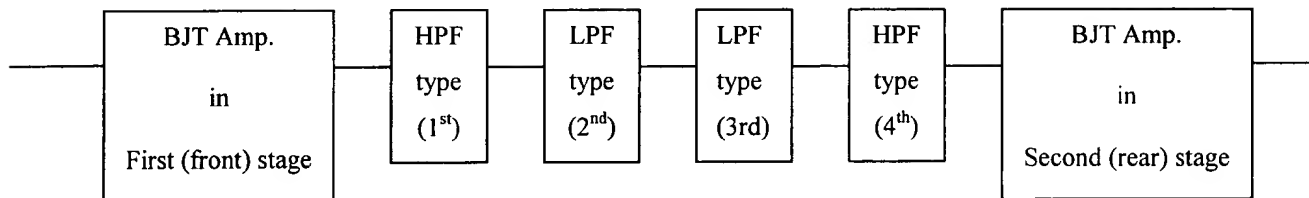
Favorable reconsideration and allowance of the subject application are respectfully requested. Claims 1-4, and 6-29 are pending in the instant application, with claims 1-2, 20-22, 24, 26, and 28 being independent. Claims 14-29 have been added by this amendment, which do not add any new subject matter.

Claim Rejections under 35 U.S.C. §102

The Examiner rejected claims 1-4 and 6-13 under 35 U.S.C. §103(a) as being unpatentable over *Mizan et al.* (US Patent No. 5,339,047). This rejection is respectfully traversed insofar as it pertains to the presently pending claims.

As previously submitted in the amendment dated March 24, 2003, in the configuration of *Mizan et al.* a connection of two BJT amplifiers (as shown in Fig. 5,) requires two combination matching circuits (each consisting of two matching circuits). The first *combination matching* circuit consisting of a combination of a LPF type and a HPF type, which are connected to the output side of the first stage BJT amplifier. The second combination matching circuit consisting of a combination of a LPF type and a HPF type, which are connected to the input side of the second (or rear) stage BJT amplifier. In other words, the connection of the adjacent BJT

amplifiers in Mizan et al. requires four matching circuits connected in series, as shown below:



In other words, in Mizan et al., the adjacent BJT Amplifiers are connected in series through the 4 stage matching units as: <BJT Amplifier> --- (1) HPF type --- (2) LPF type --- (connection node) --- (3) LPF type --- (4) HPF type --- <BJT Amplifier>, wherein the first stage matching unit ((1)HPF type) and the second stage matching units ((2)LPF type) form the output-side combination matching circuit, and the third stage matching unit ((3)LPF type) and the fourth stage matching units ((4)HPF type) form the input-side combination matching circuit.

In Mizan et al. the impedance of the output-side combination matching circuit (made up of (1)+(2)) is matched (or set) to 50Ω and the impedance of the input-side combination matching circuit (made up of (3)+(4)) is set to 50Ω. That is, the impedance of the connection node between the output side combination matching circuit (made up of (1) + (2)) and the input-side combination

matching circuit (made up of (3)+ (4)) becomes 50Ω .

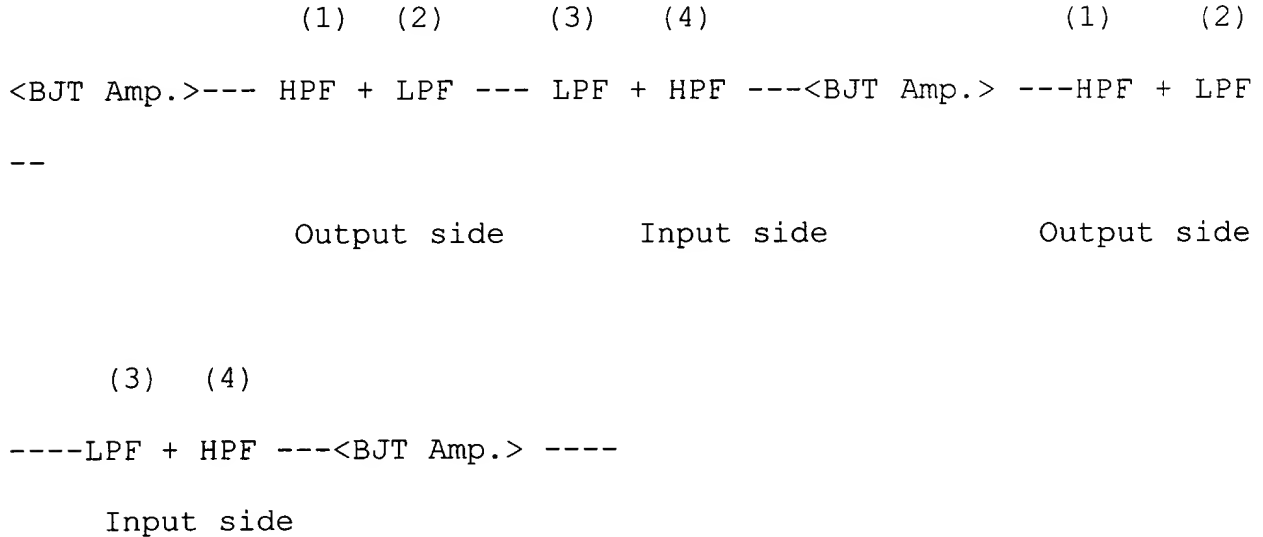
Therefore, in Mizan et al. the number of matching units placed between a pair of the adjacent BJT amplifiers must be four. In other words, Mizan et al. does not teach a different configuration other than having four (4) stage matching units in order to match a pair of the adjacent BJT amplifiers.

This is because, before matching, the impedances at the input side and the output side of the BJT Amplifiers are different from each other, and the impedance of the (1) HPF type and (2) LPF type in the output-side combination matching circuit are also different from the impedance of the (3) LPF type and (4) HPF type in the input-side combination matching circuit.

In Mizan et al., with reference to Fig. 1., the use of the four matching units (1), (2), (3), and (4) can achieve the correct matching of a pair of the adjacent BJT Amplifiers because the impedance of (2) LPF type in the output-side combination matching circuit is the same of the impedance of (3) LPF type in the input-side combination, namely the impedance of the connection node between (2) and (3) becomes 50Ω .

(3)	(4)		(1)	(2)
LPF + HPF	---	<BJT Amp.>	---	HPF + LPF
Input side				Output side

In *Mizan et al.*, and as stated above, the connection of a pair of the adjacent BJT Amplifiers must require the following configuration (please see Fig.5 in *Mizan et al.*):



In contrast thereto, the present invention as recited in claims 1 and 2 requires only two matching units that are placed between the adjacent BJT amplifiers. In other words, the two stage matching circuit comprises: (1) a high pass filter type matching circuit; and (2) a low pass filter type matching circuit. Whereby, the high pass filter type matching circuit has a parallel inductor and a serial capacitor and is formed only in a single stage, and the low pass filter type matching circuit is formed only in a single stage, to thereby form the 2 (two) stage matching circuit, e.g., the two single stage low and high pass filter type matching

units form the two-stage matching circuit.

Dependent claims 3-4, 6-13, should be considered allowable at least for depending from an allowable base claim.

Accordingly, withdrawal of the Examiner's rejection is respectfully requested.

Regarding new independent claims 20-21, the cited prior art fails to teach or suggest the combination of elements including that: (1) the serial capacitor, the parallel capacitor, and the serial inductor are connected with one another with a direct electrical connection, as recited in claim 20; and (2) the serial inductor, the parallel inductor, and the serial capacitor are connected with one another with a direct electrical connection, as recited in claim 21.

Regarding new independent claims 22 and 24, the cited prior art fails to teach or suggest the combination of elements including a two-stage matching circuit comprising: (1) a high pass filter type matching unit having only a parallel inductor and a serial capacitor, thereby forming a first stage; and (2) a low pass filter type matching unit having only a serial inductor and a parallel capacitor, thereby forming a second stage.

Regarding new independent claims 26 and 28, the cited prior art fails to teach or suggest the combination of elements including

a matching circuit consisting of a one-stage high pass filter type matching unit having a parallel inductor and a serial capacitor, and a one-stage low pass filter type matching unit having a serial inductor and a parallel inductor.

Lastly, new dependent claims 14-21, 23, 25, 27, and 29 should be considered allowable at least for depending from an allowable base claim.

Conclusion

In view of the above amendments and remarks, this application appears to be in condition for allowance and the Examiner is, therefore, requested to reexamine the application and pass the claims to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Martin Geissler (Reg. No. 51,011) at the telephone number below, which is located in the Washington, DC area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees


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required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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